

## INFORMATION REPORT INFORMATION REPORT

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COUNTRY Poland

REPORT

SUBJECT Waterways in Poland

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report on waterways in  
Poland. This report covers the characteristics of 11 waterways,  
including information on existing dams and the planned development  
of the waterways.

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ARMY review completed.

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## WATERWAYS IN POLAND (C)

## Introduction

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The following is a list of locations referred to in this report, with coordinates for each:

<u>Location</u>	<u>Geographical Coordinates</u>	<u>UTM Coordinates</u>
BACIUTY	N53-04, E22-58	FD-3480
BIELSKO-BIALA	N49-49, E19-02	CA-6020
BYDGOSZCZ	N52-09, E18-00	BD-0091
CZCHOW	N49-50, E20-41	DA-7620
CZESTOCHOWA	N50-48, E19-07	CB-6831
DABIE	N53-24, E14-40	VV-7816
DEBLIN	N51-31, E21-47	EC-6112
FRANKFURT ON ODER	N52-21, E14-34	VU-7000
GDANSK	N54-20, E18-40	CF-4825
GLIWICE	N50-17, E18-40	CA-3474
GOCZALKOWICE	N49-57, E18-58	CA-5234
KOSTRZYN	N52-35, E14-40	VU-2777
KOZLE	N50-20, E18-10	BA-9881
KRAKOW	N50-02, E19-58	DA-2447
LWOW	N49-51, E24-01	KR-8625
MIELNIK	N52-20, E23-03	FD-3900
NAKLO	N53-09, E17-36	XU-7491
NAREW	N52-55, E23-30	FD-6966
NIEMIROW	N52-17, E23-10	FC-4896
NOWY DWOR	N52-25, E20-44	DD-8109
NOWY KORCZYN	N50-18, E20-49	DA-8672
NOWY TARG	N49-29, E20-02	DV-3082
OBORNIKI	N52-39, E16-49	XU-2335
OPATOWIEC	N50-14, E20-44	DA-8066
OPOLE	N50-41, E17-55	YS-0717
OSWIECIM	N50-03, E19-15	CA-7344

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<u>Location</u>	<u>Geographical Coordinates</u>	<u>UTM Coordinates</u>
OTMUCHOW	N50-28, E17-09	XR-5493
PILICA	N50-28, E19-39	DA-0592
POZNAN	N50-06, E18-13	XU-3008
RACIBORZ	N50-06, E18-13	CA-0253
ROZNOW	N49-46, E20-41	DA-7713
SANDOMIERZ	N50-41, E21-45	EB-5414
SEROCK	N52-30, E21-04	ED-0518
SERPELICE	N52-16, E23-04	FC-4094
SZCZECIN	N53-25, E14-32	VV-7020
TURAWA	N50-45, E18-04	BB-9425
TORUN	N53-01, E18-36	CD-3976
WOLIN	N53-01, E14-38	VV-7566
WROCLAW	N51-06, E17-02	XS-4463
ZAKLICZYN	N49-48, E20-50	DA-8623
ZIELONA GORA	N51-56, E15-30	WT-3554

1. Wislá River

Originating in the vicinity of BIELSKO-BIALA, this river flowed in an easterly direction, gradually turning toward the north in the area east of KRAKOW, then flowing north in a winding course until it emptied into the Baltic Sea in the vicinity of GDANSK. [ ] the river [ ] was 10 m wide between GOCZALKOWICE and KRAKOW, but due to the construction of a dam in GOCZALKOWICE in 1956 [ ] the width increased to 20 m. Between the following cities the width varied as follows: KRAKOW-NOWY KORCZYN, 20 m; NOWY KORCZYN-SANDOMIERZ, 25 m; SANDOMIERZ-DEBLIN, 40 m; DEBLIN-WARSAW, 40 m; WARSAW-TORUN, 50 m; TORUN-GDANSK, 55 to 60 m.

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[ ] the river was navigable between KRAKOW and GDANSK. In late 1957, however, work was in progress to deepen, dredge, and build up the banks between KRAKOW and OSWIECIN in order to accommodate larger vessels in this area.

Most of the embankments were man-made of stone, sand and clay, with an average height of two to four meters. [ ] the velocity of the current [ ] as three-fourths meter per second with an average depth of four meters. The river was unnavigable between December and March, at which time it was frozen. The bottom was of sand and loam and continual dredging operations were in progress along the entire length of the river.

A dam was completed in GOCZALKOWICE in 1956. It was made of stone, was 500 m long, 30 m high, and 3 m wide at the top. The lake formed by the dam was 30 km<sup>2</sup> with a depth of 15 m at the dam and an average over-all depth of 8 m. It was used as a reservoir, supplying drinking water for the entire Upper Silesian area and water for industry in Upper Silesia.

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[ ] there was no power station at the dam site as of late 1957, but that one was planned for the near future.

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[ ] information on bridges crossing the Wisla River:

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a. Highway Bridge at UTM Coordinates CA-555332

This was a concrete slab highway bridge 20 m long by 6 m wide, with an underbridge clearance of 3 m. The bridge had two spans, concrete abutments, and was in good condition. The water gap was estimated at 12 to 15 m.

b. Highway Bridge at UTM Coordinates CA-741474

This was a 2-or 3-span concrete highway bridge 30 m long by 6 m wide, with stone abutments and an underbridge clearance of 4 m. [ ] this bridge in September 1957 [ ] was under construction and was to replace a wooden bridge. At that time it had wooden supports and the water gap was 20 m. 1.

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c. Highway Bridge at UTM Coordinates CA-709476

This was a two-span concrete highway bridge 20 m long by 6 m wide, in good condition. The underbridge clearance was 4 m and the water gap 15 m. The bridge was rebuilt after WW II.

d. Bridges in KRAKOW

[ ] KRAKOW there were four bridges crossing the Wisla River at the following UTM coordinates: DA-245445;<sup>2</sup> DA-246447;<sup>2</sup> DA-251449,<sup>2</sup> and DA-252450.<sup>3</sup>

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e. Bridge at UTM Coordinates EA-055751

This was a four-span steel arch highway bridge over 50 m long by 6 m wide, in good condition. Its three supports and abutments were made of stone; the water gap was 30 m; and the underbridge clearance was 4 m. The bridge was rebuilt after WW II.

f. Railroad Bridge at UTM Coordinates EC-577118

This was a four or five-span steel arch, two-track railroad bridge, 70 m long by 6 m wide, in good condition. This bridge, which was rebuilt after WW II, had stone supports and abutments and an underbridge clearance of 4 to 5 m over a water gap of 50 m.

g. Highway Bridge at UTM Coordinates EC-030875

[ ] on the outskirts of WARSAW there was a highway bridge which looked like an open spandrel steel arch type. It was between 150 and 200 m long and 6 to 8 m wide, in good condition, and had stone supports and abutments. Besides the Wisla River, which had a water gap of 80 m, there were also several streets under the bridge. The underbridge clearance was five to six meters. The bridge was rebuilt after WW II.

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## h. Railroad Bridge at UTM Coordinates EC-028879

This was a steel arch, two-track railroad bridge over 100 m long by 6 m wide, in good condition. [redacted]

[redacted] the supports were of stone, as were the abutments. The bridge spanned both the Wisla River, which had a water gap of 80 m, and a 10-m-wide street. The underbridge clearance was five meters. The bridge was rebuilt after WW II.

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## i. Highway Bridge at UTM Coordinates EC-015892

This was a five-span highway bridge that looked like an open spandrel steel arch type. It was over 100 m long by 12 to 15 m wide, in good condition, and had stone supports and abutments. The water gap was 80 m, the underbridge clearance 5 m. The bridge was rebuilt after WW II.

## j. Railroad Bridge at UTM Coordinates CD-110922

This was a five-span, two-track railroad bridge. It was a through Howe truss bridge made of steel. It was 70 m long by 7 m wide, with four piers of unknown composition. The spans measured 10, 15, 20, 15 and 10 m. The water gap was 50 m and the underbridge clearance 6 to 7 m.

## k. Bridge at UTM Coordinates DD-113217

This was a steel arch bridge 150 m long by 12 m wide over which crossed a 6-m-wide road and a one-track, 3-m-wide railroad. The bridge was in good condition, with five or six spans, and its abutments as well as its four or five supports were made of stone. The underbridge clearance was 5 m and the water gap 100 m. The bridge was rebuilt after WW II.

## l. Bridge at UTM Coordinates CE-568964 2.

2. Przemsza River

The origin of the Przemsza River was at the confluence of the Biala Przemsza and Czarna Przemsza Rivers, located at UTM coordinates CA-6966. From this point the river flowed south until it fell into the Wisla River at UTM coordinates CA-738478. Although shown on maps as the "Przemsza River" between these two points [redacted] in reality it was an extension of the Biala Przemsza River which had its origin in the vicinity of UTM coordinates DA-1177 and was commonly known by that name.

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[redacted] a dirty river, four to six meters wide. It had man-made stone banks in some places, earth banks in others, and along many sections it had no banks to stop the overflow during rainy seasons. The river was not navigable. It had a silt bottom, an average depth of 70 cm, and its current flowed at the rate of 5 m per second. [redacted] since the water contained industrial refuse, such as grease, chemical dregs and other assorted rubbish, it seldom froze in winter.

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There was a bridge crossing the Przemsza River at UTM coordinates CA-680676. 2.

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3. Dunajec River

Originating at the confluence of the Czarny Dunajec and Bialy Dunajec Rivers on the eastern outskirts of NOWY TARG, the Dunajec River wound in an easterly, then northerly direction until it emptied into the Wisla River at OPATOWIEC. This was a crystal clear river normally 10 m wide, but in the spring widening to 50 m. Its banks were man-made breastworks of earth in some places and rush mats in others. This river was unnavigable due to its swift current (8 to 12 m per second). It had a depth of two to three meters, a stone and gravel bottom, and it usually froze in January or February.

There were two dams located along the course of this river, one at ROZNOW and the other at CZCHOW. The dam at ROZNOW, built before WW II, formed a lake 30 km sq. The dam was 40 to 50 m long, at least 35 m high, and 3 m wide at the top. It was constructed of stone blocks, and had a large electric power station located at its base. The lake at the dam was 25 m deep. The lake extended between UTM coordinates DA-7507 and DA-7713.

The dam at CZCHOW was constructed in 1953. It formed a lake 10 km sq. The dam was 18 to 20 m high, 50 m long, 3 m wide at the top; was made of stone blocks, and had a small electric power station located at its base. The lake at the dam was eight meters deep.

River: [redacted] information on bridges crossing the Dunajec 25X1

## a. Highway Bridge at UTM Coordinates DA-842241

This was a four-span, flat, wooden bridge, 50 m long by 4 m wide, in poor condition. The abutments of this highway bridge were of stone, and the three piers were of timber. The underbridge clearance was 3 m and the water gap was 30 m. [redacted] the bridge was dangerous and under constant repair, and because of this, it was frequently necessary to re-route buses ordinarily crossing this bridge, through ZAKLICZYN. 25X1

## b. Highway Bridge at UTM Coordinates DV-776979

This was a three-span, open spandrel, concrete arch highway bridge, 40 m long by 5 to 6 m wide, in good condition. The abutments and the two supports were of stone; the underbridge clearance was four meters, and the water gap was 20 m. The bridge was built after WW II.

## c. Other Bridges

For a description of bridges located at the following UTM coordinates, see referenced comments: DA-921399;<sup>3</sup> DA-918359;<sup>2</sup> and DV-775973.<sup>3</sup>

4. Pilica River

[redacted] The river originated immediately southeast of PILICA, then proceeded in a northerly direction until it emptied into the Wisla River in the vicinity of UTM coordinates EC-1946. Its average width was 20 m, and it was unnavigable with the possible exception of the waters at its confluence with the Wisla River. 25X1

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It had natural banks in its lower regions and man-made earthen breastworks in its upper regions. The river had an average depth of three meters, an estimated current speed of three meters per second, and a sand and loam bottom. It was frozen between December and March. [redacted] there were many sand islands along its course and that he knew of no dams or planned development where this river was concerned.

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[redacted] two bridges crossing the Pilica River. The first of these, located at UTM coordinates DB-222900, was a concrete, three-span highway bridge, 60 m long by 5 m wide, in good condition. The abutments and 2 supports were of stone; the water gap was 20 m; and the underbridge clearance was 3 m.

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The second bridge was located at UTM coordinates DC-968233.<sup>2</sup>.

#### 5. Narew River

Originating in the Soviet Union, the Narew River crossed the Polish border at UTM coordinates FD-9666, then followed a winding course through northeast Poland until it flowed into the Wisla River at NOWY DWOR.

The river had an average width of 20 m, a depth of from 3 to 4 m, and an estimated current speed of 3 m per second. It had a sand and loam bottom and natural banks along most of its course; however, in various unidentified sectors there were man-made earthen breastworks. The river was frozen from December to March. [redacted]

25X1

small boats travelled it. [redacted] between BACIUTY and NAREW there were many mud flats.

[redacted] The first of these was located at UTM coordinates ED-064388. It was a concrete slab, 4-span highway bridge, 80 m long by 5 m wide, in good condition. The abutments and 3 supports were of stone, the water gap was 60 m, the underbridge clearance was 4 m. The bridge was rebuilt after WW II.

The second bridge was located at UTM coordinates DD-795100.<sup>2</sup>.

#### 6. Bug River

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[redacted] This river had its origin in the Soviet Union, and flowed north forming the Polish-Soviet Union border to NIEMIROW. From there the river wound toward the west to SEROCK where it united with the Narew River. It had an average width of 15 m, a depth of 3 m, and an estimated velocity of 3 m per second. Its bottom was of sand and loam, and the banks were built up along much of its course. The water was frozen between December and March. [redacted] some form of navigation existed in the summer [redacted] fishing boats along the river banks. There were many fords located along the river (specific locations were unknown).

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[redacted] general plans calling for the construction of artificial waterfalls consisting of three steps, to be located between MIELNIK and SERPELICE; for a dam 15.6 km east of MIELNIK; and for an electric power station. The ground at the area of the proposed dam site had been sounded and detailed plans were to be finalized in 1957. Construction work was expected to begin in 1958.

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[redacted] some form of canals existed on the Bug River [redacted]

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[ ] information on bridges located over the Bug River [ ] as follows: 25X1

a. Bridge Between UTM Coordinates FD-050110 and FD-050132

[ ] It was a new, 25X1  
3-span, steel arch bridge, 60 m long by 8 m wide, with an underbridge clearance of  
3.5 to 4 m, over a water gap of 30 m. [ ] 25X1

[ ] the supports were of stone. [ ] 25X1

[ ] shortly after its completion. [ ] there were no road  
or railroad approaches to the bridge, and it was utilized only by pedestrians and  
horse-drawn vehicles. [ ] it was a "strategic bridge" (sic) built to 25X1  
accommodate at some future date, the highway from the Soviet Union to BERLIN.

25X1

b. Highway Bridge at UTM Coordinates FD-062086

This was a 3-span, steel truss highway bridge, 60 m long by 5 m wide,  
in poor condition. The abutments were of stone, as were the two supports. The  
underbridge clearance was from 3 to 4 m, and the water gap was 40 m. The center  
span had been reconstructed of wood after the bridge had been blown up during WW II, 25X1

c. Highway Bridge at UTM Coordinates ED-313272

This was an open spandrel, concrete arch highway bridge, 60 m long by  
6 m wide, in good condition. The bridge had three or four spans and appeared new  
[ ] Its abutments and 2 or 3 supports were of stone, 25X1  
the underbridge clearance was 3 to 4 m, and the water gap was 25 to 30 m.

7. Warta River

[ ] This river began 25X1  
its winding north-westerly course on the eastern outskirts of CZESTOCHOWA, and  
terminated by flowing into the Odra River at KOSTRZYŃ. The Warta River had an  
average width of 12 m and depth of 4 m, and an estimated current speed of 3 m per  
second. The bottom was of sand and loam, and the river was 60 percent regulated  
by the many breastworks found along its course. [ ] river traffic 25X1  
existed because he saw small vessels 80 km south of POZNAN. [ ]  
[ ] hazards to shipping existed in the 25X1  
form of shallow places. The river usually remained frozen through January and  
February.

[ ] bridges crossing the Warta River at the following UTM 25X1  
coordinates: CC-449192;<sup>2</sup> XU-313040;<sup>3</sup> WU-924409;<sup>3</sup> CB-685297;<sup>2</sup> CB-900445;<sup>2</sup> and  
CB-903445.<sup>2</sup>

8. Odra River

[ ] 25X1  
Originating in Czechoslovakia, the Odra River crossed the Polish border at  
UTM coordinates CA-0934, then flowed northwest by north until it emptied into the  
port at SZCZECIN. It had an average width of 30 m and depth of 3.5 m, and an  
estimated current speed of 3 m per second. The bottom was of sand and loam, and  
although there were many islands throughout the whole course of the river, they  
were not considered hazards to shipping. The water was frozen usually in January  
and February.

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[redacted] natural banks constituted the greatest extent of the river and that it was 90 percent regulated. The river was navigable from SZCZECIN south to RACIBORZ, accommodating vessels up to 30 tons.

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Although not located on the Odra River itself, there were two dams which aided navigation by regulating the flow of the water into the Odra. The first of these was located in OTMUCHOW. This dam was 12 m high, 25 m long, and 2 m wide at the top. It was made of stone, and formed a lake 50 km sq, depth unknown. There was a small electric power station located at its base.

The second dam, at TURAWA, was 15 m high, 20 m long, and 2 m wide at the top. It was made of stone and formed a lake 30 km sq which was 8 m deep at the base of the dam.

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[redacted] information on bridges crossing the Odra River:

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a. Wooden Highway Bridge at UTM Coordinates CA-086369

This was a 2- or 3-span, flat wooden highway bridge, in good condition, 25 m long by 5 m wide. The bridge supports were of wood and the abutments of stone. The underbridge clearance was 3 m and the water gap was 15 m.

b. Highway Bridge at UTM Coordinates YR-108961

This was a 3-span, concrete slab highway bridge, 30 m long by 6 m wide, in good condition. Rebuilt after WW II, the bridge had an underbridge clearance of 4 m and a water gap of 25 m.

c. Highway Bridge at UTM Coordinates YS-068171

This was a 2-span, flat highway bridge made of stone; it was 20 m long by 5 m wide, and in good condition. The abutments and the one support were of stone, the underbridge clearance 3 m, and the water gap was 15 m.

d. Highway Bridge at UTM Coordinates YS-065173

This was a 3-span, concrete slab highway bridge, 30 m long by 6 m wide, in good condition. The bridge had stone supports and concrete abutments, an underbridge clearance of 4 m, and a water gap of 25 m.

e. Highway Bridge at UTM Coordinates YS-065174

This was a 2-span, concrete slab highway bridge, 20 m long by 6 m wide, in good condition, with a stone support and concrete abutments. The underbridge clearance was 4 m, and the water gap was 15 m.

f. Highway Bridge at UTM Coordinates YS-061180

This was a concrete slab highway bridge, 40 m long by 6 m wide, with 3 spans, and it was in good condition. The underbridge clearance was 4 m, and the water gap was 35 m.

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## g. Four Other Bridges

These were located at the following UTM coordinates: YS-062167;<sup>3</sup> BA-976803;<sup>2</sup> BA-973802;<sup>2</sup> and BA-973817.<sup>3</sup>

## h. Highway and Trolley Car Bridge at UTM Coordinates XS-439643

This was a one-span, steel, suspension highway bridge, 40 m long by 10 m wide, in good condition. The bridge had stone abutments, an underbridge clearance of 5 m, and a water gap of 25 m. In addition to the road on the bridge, which had been rebuilt in 1948, there were two trolley car tracks.

## i. Highway and Trolley Car Bridge at UTM Coordinates XS-437646

[redacted] this was a steel 3-span bridge, 35 m long by 10 m wide, and its two supports were of stone. The water gap was 25 m. In 1949 the then existing combination steel and wood bridge was disassembled and construction on this bridge had progressed since that date until late 1957 [redacted] In addition to the road, there were two trolley car tracks on the bridge.

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## j. Highway and Trolley Car Bridges at UTM Coordinates XS-426649

These were 2 consecutive, flat, stone highway bridges with steel railings, separated by a 10-m strip of land. One was 15 m long by 12 m wide, and the other was 20 m long by 12 m wide. Both were in good condition. Each had an underbridge clearance of 3 to 4 m, and a water gap of 12 to 15 m. Both were rebuilt after WW II. Each bridge also had two trolley car tracks.

## k. Highway and Trolley Car Bridge at UTM Coordinates XS-430648

This was a one-span, steel truss highway bridge, in good condition. It was 12 m long by 6 m wide, had stone abutments, and an underbridge clearance of 3 m. Construction on rebuilding this bridge was completed in 1950. The water gap was eight meters. There was also one trolley car track on this bridge.

## l. Highway and Trolley Car Bridge

Adjacent to the previously described bridge was a one-span, steel arch, trough type highway bridge, 12 m long by 6 m wide, in good condition. The abutments were of stone, the underbridge clearance was 3 m, and the water gap 10 m. There was also one trolley car track on this bridge. Reconstruction of this bridge was finished in 1950.

## m. Bridge at UTM Coordinates XS-424648

This was a 4-span, filled spandrel, stone arch bridge, 35 to 40 m long by 10 m wide, in good condition. The abutments and the 3 supports were of stone, the underbridge clearance was 3 m, and the water gap was 30 m. The bridge was rebuilt after WW II.

## n. Railroad Bridge at UTM Coordinates XS-416660

This was a 4-span, steel arch railroad bridge, in good condition, 40 m long by 6 m wide. The abutments and the 3 supports were of stone; the underbridge clearance was 4 m; and the water gap was 30 m. This bridge was rebuilt after WW II. It had two railroad tracks crossing it.

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## o. Highway and Trolley Car Bridge at UTM Coordinates XS-442665

This was a 4- or 5-span concrete highway bridge, 40 m long by 10 m wide, in good condition. Its three or four supports were of stone, as were its abutments. The underbridge clearance was 5 m, the water gap was 35 m. This bridge was rebuilt after WW II. There were also two trolley tracks on this bridge.

## p. Railroad Bridge at UTM Coordinates XS-440668

This was a five-span, two-track, steel latticed truss, multiple-span railroad bridge, in good condition. It was 50 m long by 6 m wide, and its abutments and 4 supports were made of stone. The underbridge clearance was 5 m and the water gap was 30 m. The bridge was rebuilt after WW II.

## q. Railroad Bridge at UTM Coordinates WS-997963

This was a steel, 4-span, 2-track railroad bridge, type unknown, 80 m long by 6 m wide, in good condition. It was rebuilt after WW II; had an underbridge clearance of 5 m, and the water gap was 60 m.

## r. Highway Bridge at UTM Coordinates WS-995966

This was a 3- or 4-span concrete highway bridge, 60 m long by 6 m wide, in good condition. Rebuilt after WW II, this bridge (type unknown) had an underbridge clearance of 4 m, and the water gap was 60 m.

## s. Wooden Highway Bridge at UTM Coordinates WT-758249

This was a 4- or 5-span, wooden highway bridge, 80 to 100 m long by 4 m wide, in poor condition. In addition to its two stone supports, it had piers made of timber. The water gap was 65 to 70 m. [redacted] in 1952, a concrete bridge was under construction alongside it. [redacted]

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## t. Railroad Bridge at UTM Coordinates WT-754251

This was a 4- or 5-span, steel arch, two-track railroad bridge, 70 to 100 m long by 6 m wide, in good condition. The abutments and supports were of stone; the underbridge clearance was 5 m; and the water gap was 60 m.

## u. Highway Bridge at UTM Coordinates VV-666105

This was a 3- or 4-span, concrete highway bridge, over 50 m long by 15 m wide, in good condition. The abutments and the two or three supports were of concrete and the underbridge clearance was five meters. The water gap was 40 m. This bridge was built prior to WW II. 4.

## v. Highway Bridge at UTM Coordinates VV-688100

This was a 4- or 5-span, concrete highway bridge, in good condition, 60 m long by 15 m wide. The abutments and the three or four supports were of concrete. Built before WW II, it had an underbridge clearance of 5 m, and the water gap was 50 m. 5.

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## w. Canals on the Odra River

several canals on the Odra River [redacted] two natural, 20 m wide passageways in OPOLE; three natural passageways at SZCZECIN, two that went through the city and one that bypassed it, leading in the direction of DABIE; two man-made waterways in WROCLAW; the Odrzanski Canal located 80 km northeast of ZIELONA GORA; and the Oder-Spree Canal located 30 km south of FRANKFURT ON ODER. the Gliwicki Canal which connected GLIWICE and KOZLE was 80 km long, 10 to 20 m wide and was made of stone and steel. three gates on the canal [redacted] The canal served primarily for the shipment of coal and ore.

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## x. Bridges Spanning the Gliwicki Canal

## (1) Highway Bridge at UTM Coordinates CA-308792

This was a one-span, steel truss highway bridge, 20 m long by 5 m wide, in good condition. This pre-WW II bridge had stone abutments, and an underbridge clearance of four meters. The water gap was 15 m.

## (2) Highway Bridge at UTM Coordinates CA-195850

This was a concrete slab bridge serving the autostrade. It was in good condition. [redacted] it was 20 m long by 15 m wide, with concrete abutments, an underbridge clearance of 4 m, and the water gap was 15 m. It was built during WW II by the Germans.

25X1

9. Dievenow River

Originating immediately south of WOLIN, this river, better known as the Odra Canal, widened into an expansive water area which connected with the Baltic Sea. [redacted] the river [redacted] was 40 to 50 m wide at its southernmost extremity, with a depth not exceeding 6 m and an estimated current speed of 4 m per second. Spanning the river from the eastern edge of WOLIN was an improvised wooden bridge at UTM coordinates VV-750661, over which one car at a time could pass, and within 50 m of it, a one-track, 80 m long railroad bridge at UTM coordinates VV-753668.

25X1

25X1

[redacted] there was no place for a second track. The banks in the immediate vicinity of the bridges were of stone while the remaining areas were of earth. The bottom was of loam and sand, and many small islands could be seen. The water was usually frozen in January and February.

25X1

25X1

[redacted] the area along this river was totally uninhabited, and that although the river could accommodate water traffic, it was not used for this purpose. Vessels desiring access to the Baltic Sea used the Swine Canal, UTM coordinates VV-5868.

25X1

10. Bydgoski Canal

The Bydgoski Canal joined the Wisla and Notec Rivers at BYDGOSZCZ and NAKLO, respectively. It was over 100 km long and 15 m wide, and made of stone and steel at BYDGOSZCZ, [redacted] it was well built; able to accommodate a 200-ton barge; and was considered one of the most important waterways in Poland. Parallel to at least a portion of the northern side of this canal there was a two-lane asphalt road.

25X1

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25X1

11. Zalew Szczecinski (Szczecin Inlet)

Originating at the Port of Szczecin, at UTM coordinates VV-7219, this waterway proceeded north until it joined the Baltic Sea at UTM coordinates VV-529752. Although its average depth was only 2 m, there was a 100-m-wide channel in the center which had an average depth of 10 to 15 m and a maximum depth of 50 m. The water was frozen in January and February, but with the aid of ice-breakers, passage for vessels was usually kept open.

[redacted] only medium sized ships 25X1  
could negotiate the channel. However, it was desired that the channel be widened to permit sea-going ships to negotiate to the Port of Szczecin. [redacted] 25X1

COMMENTS

1.

description of this same bridge [redacted]

Located one-half kilometer north of OSWIECIM, over the Wisla River, the existing wooden bridge was being replaced by a concrete beam, three-span bridge, 30 m long by 8 m wide. The center span was 10 m long between piers, and the 2 smaller ones, 5 m each. The water gap was 10 m and the under-bridge clearance 6 m.

25X1

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